REMARKS

I. Introduction

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

As required by the Examiner in the Advisory Action dated July 5, 2007, the title has been amended to be more descriptive of the claimed invention.

Claims 1-12, 14-43 and 48-55 are cancelled. The cancellation of claims does not constitute acquiescence in the propriety of any rejection set forth by the Examiner. Applicants reserve the right to pursue the subject matter of the canceled claims in subsequent divisional applications.

Claims 56-70 are new. Support for these new claims can be found, *inter alia*, in the specification as follows: ¶ 25; ¶ 26; ¶ 131; 134; ¶ 135; ¶¶ 146-152; ¶¶ 172-174; ¶ 230; the Sequence Listing; the Examples; and the original claims.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

Upon entry of this Amendment, claims 56-70 will remain pending and ready for examination in the application.

It is acknowledged that the foregoing amendments are submitted after final rejection of the claims. However, because the amendments do not introduce new matter, and either place the application in condition for allowance or at least in better condition for appeal, entry thereof by the Examiner is respectfully requested.

II. Response to Issues Raised by Examiner in Outstanding Office Action

a. Claim Rejections - 35 U.S.C. § 102

Claim 12 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Paice et al. (Accession No. P18429, UnitProt Database, 1990 and Arch. Microbiol. 1986, Vo. 144:201-206, cited in the IDS) ("Paice") or Wolf et al. (Accession No. 140569, PIR Database, 1996 and Microbiology, 1995, Vol. 414:281-290, cited in the IDS) ("Wolf"). Applicants respectfully traverse this rejection as it applies to the amended claims.

An anticipation rejection under 35 U.S.C. § 102 requires a showing that each limitation of a claim is found in a single reference, practice or device. *See In re Donohue*, 766 F.2d 531 (Fed. Cir. 1985). For a reference to be anticipatory, it must "be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *See In re Paulson*, 30 F.3d (Fed. Cir. 1994). The cited references do not anticipate the present claims as they do not teach each and every element of the claims.

The Examiner alleges that Paice and Wolf "teach the enzyme composition in a substance for making a bakery product" and further characterizes the claim as being "simply drawn to a composition comprising the xylanase enzyme having the amino acid sequence of SEQ ID NO:5 and so does the references." Office Action, pages 3 and 4. Applicants respectfully disagree. Claim 56, which corresponds with claim 12, now includes the limitation "wherein said bakery product or substance for making a bakery product is suitable for use in a foodstuff". This limitation was added to highlight the necessity that the composition must be suitable for a foodstuff, which is required since the claim is drawn to a bakery product or substance for making a bakery product, which are both foodstuffs. Thus, contrary to the Examiner's assertion, the claim does not broadly encompass *any* composition comprising the xylanase enzyme of SEQ ID NO:5. Instead, the claim is drawn to foodstuffs comprising a xylanase expressed from a sequence of SEQ ID NO:6, specifically bakery products or substances for making a bakery product.

Neither reference teaches the enzyme in a bakery product or a substance for making a product for use in a foodstuff. Paice discloses a xylanase purified in a Tris-HCl buffer with a pH of 8.0, then dialyzed in a buffer of 0.05 Tris-HCl, pH 8.0. The xylanase was characterized in assays of wood xylan digestion, without specifying the conditions, which were presumably not suitable for a foodstuff. Likewise, Wolf discloses the isolation and characterization of a xylanase, *not* the xylanase in a bakery product or a substance for making a product suitable for use in a foodstuff. The Examiner states that these references "disclose a substance, *i.e.*, a buffer which could be used in the making of a bakery product comprising the amino acid sequence SEQ ID NO:5 having xylanase activity." Office Action, page 2. However, the Examiner fails to explain how these industrial and analytical buffers are suitable for use in a foodstuff, much less a bakery product.

Since neither reference teaches the use of the xylanase in a foodstuff, namely a bakery product or substance for making a food product, they cannot anticipate the present claims. Therefore, Applicants respectfully request that the rejection be withdrawn.

b. Claim Rejections - 35 U.S.C. § 103

Claims 48-55 are rejected under 35. U.S.C. 103(a) as being allegedly unpatentable over Paice or Wolf and Poutanen (Trends in Food Science and Technol. (1997) 8:300-306). Specifically, the Examiner asserts that a person of ordinary skill would have used the xylanase of Paice or Wolf with the doughs of Poutanen, which comprise various enzymes, including generic "xylanase". Applicants respectfully traverse this rejection as it may apply to the amended claims.

The Supreme Court recently reaffirmed the *Graham* factors for determining obviousness in *KSR Int'l Co.* v. *Teleflex Inc.* (No. 04-1350) (U.S., April 30, 2007) (holding that the proper inquiry for determining obviousness is whether the improvement is more than the predictable use of prior art elements according to their established functions). Further, the Court still requires that the reasoning used to combine the elements in the fashion claimed be made explicit.

The claimed invention is "more than the predictable use of prior art elements according to their established functions". At the time of the claimed invention, bacterial xylanases were considered to produce very sticky doughs, as discussed in the specification in ¶¶10-12 and shown in Example 1. This stickiness led to poorer dough handling properties, prompting the popularity of fungal xylanases over bacterial xylanases. The doughs of the claimed invention, however, are surprisingly *less* sticky than would be expected from a bacterial xylanase, yet still maintain the desirable properties of xylanase-containing doughs. Indeed, the doughs of the claimed invention are even less sticky than those incorporating fungal xylanases, as shown in Table 2. Given the performance of known xylanases, the reduced stickiness of the doughs of the present invention is surprising.

Poutanen does not address dough stickiness or other drawbacks from the use of xylanases in doughs. There is no discussion of known limitations in using xylanases, the same limitations with which one of skill in the art would be familiar. Likewise, neither Paice nor Wolf address these limitations nor extol the surprising characteristics of doughs comprising a polypeptide expressed from SEQ ID NO:6, since, as discussed previously, they relate to non-foodstuff related applications. While xylanases were known generally to confer improved properties to bread doughs, as mentioned in Poutanen, there is nothing in these references that teaches the surprising properties of the claimed doughs and bakery products.

Finally, the Examiner fails to explicitly state why one of skill in the art would combine the general teachings of Poutanen with the industrial enzyme of Paice and Wolf, given the known limitations of bacterial xylanases. While, as stated previously, it was generally known that xylanases may confer some beneficial characteristics to bread doughs, as shown in Poutanen, drawbacks were also known. Further, art that such a person of ordinary skill would be more likely familiar with as it is drawn to xylanases in bread doughs as opposed to the industrial applications of Paice, *teaches away* from the use of the specific enzyme of the claimed invention.

As discussed in the previous Reply, U.S. Pat. No. 5,306,,633 ("Gottschalk"), specifically teaches away from utilizing the Paice enzyme by unfavorable comparisons with the Röhm enzyme. Poutanen, which is a general teaching that xylanases, as a class of enzymes, may be useful in bread doughs, does not overcome the specific teaching away contained within

Gottschalk. None of these references recognize the surprising and superior properties of the claimed doughs and bakery products. Thus, a person of skill in the art would have no reason to combine the enzyme of Paice or Wolf with the doughs of Poutanen.

It should be noted that the Examiner alluded to a possible enablement issue given the teachings of Gottschalk. Applicants are perplexed by this statement. In addition to ample disclosure, there are five working examples, of which Examples 1 and 3 are most illustrative, showing data from the inventive doughs (labeled "BX"). The mere fact that Gottschalk is not enabling for the claimed invention (as it certainly is not), does not render the present specification non-enabling.

Because the claimed invention is "more than the predictable use of prior art elements according to their established functions" and because there is no reason to combine the general teachings of Poutanen with the enzyme of Paice and Wolf, especially in light of Gottschalk and the known deficiencies of bacterial xylanases, the claims are nonobvious over the cited prior art. Accordingly, Applicants respectfully request that the rejection be withdrawn.

CONCLUSION

The present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

It is acknowledged that the foregoing amendments are submitted after final rejection. However, because the amendments do not introduce new matter or raise new issues, and because the amendments either place the application in condition for allowance or at least in better condition for appeal, entry thereof by the Examiner is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By _____

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